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(FILE 'HOME' ENTERED AT 15:08:02 ON 21 FEB 2003)

FILE 'EUROPATFULL, PCTFULL, USPATFULL, USPAT2' ENTERED AT 15:08:14 ON 21 FEB 2003

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L1        554181 S VAPORI? OR EVAPORAT?
L2         91986 S AEROSOL#
L3        866219 S POLYMER?
L4         16292 S L1(L)L2 AND L3
L5          1722 S L1(7A)L2
L6        294496 S MONOMER# OR OLIGOMER#
L7        329205 S L6 OR FEEDSTOCK# OR FEED(2W)STOCK#
L8        675783 S CARRIER
L9           285 S L5 AND L3 AND L8
L10           78 S L9 AND L7
                 SET HIGH OFF
L11       866219 S L3
L12       329205 S L7
L13       675783 S L8
                 SET HIGH ON
L14           78 S L5 AND L11 AND L12 AND L13
                 SET HIGH OFF
L15       202191 S INSULAT?(4A)(FILM# OR LAYER#)
L16      1622835 S HEAT?
                 SET HIGH ON
L17           10 S L14 AND L15 AND L16
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=> d 1-10 bib ab kwic

L17 ANSWER 1 OF 10 PCTFULL COPYRIGHT 2003 Univentio
AN 2001035928 PCTFULL ED 20020820
TIEN MICROFABRICATED DEVICES FOR THE DELIVERY OF MOLECULES INTO A CARRIER FLUID
TIFR DISPOSITIFS MICROFABRIQUES POUR TRANSPORT DE MOLECULES DANS UN FLUIDE PORTEUR
IN SANTINI, John, T., Jr.; HUTCHINSON, Charles; UHLAND, Scott, Albert; CIMA, Michael, J.; LANGER, Robert, S.; AUSIELLO, Dennis
PA MICROCHIPS, INC.
DT Patent
PI WO 2001035928 A1 20010525
DS AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW GH GM KE LS MW MZ SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
AI WO 2000-US31529 A 20001117
PRAI US 1999-60/166,370 19991117
ABEN Apparati and methods are provided for the delivery of molecules to a site via a carrier fluid. The apparati include microchip devices whcih have reservoirs containing the molecules for release. The apparati and methods provide for active or passive controlled relase of the molecules. Preferred embodiments include systems for intravenous administration of drugs, wherein drug molecules are released from the microchip devices into a carrier fluid ex vivo, such as a saline solution, forming a drug/saline solution mixture which is then delivered

to a patient intravenously.
ABFR

DETD . . . upon inhalation
by the patient. The drug molecules can come out of reservoirs in the
MDI
by
any of several mechanisms, including **vaporization**, formation
of an **aerosol**,
atornization, or by Bernoulli's principle. In an alternative
embodiment,
the
1 5 molecules are released by diffusion or vaporization from the opened
reservoirs. . .

L17 ANSWER 2 OF 10 USPATFULL
AN 2002:325529 USPATFULL
TI Microfabricated devices for the delivery of molecules into a carrier
fluid
IN Santini, Jr., John T., Belmont, MA, United States
Hutchinson, Charles E., Canaan, NH, United States
Uhland, Scott A., Somerville, MA, United States
Cima, Michael J., Winchester, MA, United States
Langer, Robert S., Newton, MA, United States
Ausiello, Dennis, Wellsley Hill, MA, United States
PA MicroChips, Inc., Cambridge, MA, United States (U.S. corporation)
PI US 6491666 B1 20021210
AI US 2000-715493 20001117 (9)
PRAI US 1999-166370P 19991117 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Doerrler, William C.; Assistant Examiner: Zec, Filip
LREP Sutherland Asbill & Brennan, LLP
CLMN Number of Claims: 36
ECL Exemplary Claim: 1
DRWN 35 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 1247
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Apparati and methods are provided for the delivery of molecules to a
site via a carrier fluid. The apparati include microchip devices which
have reservoirs containing the molecules for release. The apparati and
methods provide for active or passive controlled release of the
molecules. Preferred embodiments include systems for intravenous
administration of drugs, wherein drug molecules are released from the
microchip devices into a carrier fluid ex vivo, such as a saline
solution, forming a drug/saline solution mixture which is then
delivered
to a patient intravenously.
DETD . . . by the patient. The drug molecules can come out of reservoirs
in the MDI by any of several mechanisms, including **vaporization**
, formation of an **aerosol**, atomization, or by Bernoulli's
principle. In an alternative embodiment, the molecules are released by
diffusion or vaporization from the opened. . .

L17 ANSWER 3 OF 10 USPATFULL
AN 2002:308612 USPATFULL
TI Microfabricated devices for the delivery of molecules into a carrier
fluid
IN Santini, John T., JR., Belmont, MA, UNITED STATES
Hutchinson, Charles E., Canaan, NH, UNITED STATES
Uhland, Scott A., Somerville, MA, UNITED STATES
Cima, Michael J., Winchester, MA, UNITED STATES
Langer, Robert S., Newton, MA, UNITED STATES
Ausiello, Dennis, Wellsley Hill, MA, UNITED STATES
PI US 2002173745 A1 20021121

AI US 2002-195338 A1 20020715 (10)
RLI Continuation of Ser. No. US 2000-715493, filed on 17 Nov 2000, PENDING
PRAI US 1999-166370P 19991117 (60)
DT Utility
FS APPLICATION
LREP SUTHERLAND ASBILL & BRENNAN LLP, 999 PEACHTREE STREET, N.E., ATLANTA, GA, 30309
CLMN Number of Claims: 19
ECL Exemplary Claim: 1
DRWN 13 Drawing Page(s)
LN.CNT 1175
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Apparatus and methods are provided for the delivery of molecules to a site via a carrier fluid. The apparatus include microchip devices which have reservoirs containing the molecules for release. The apparatus and methods provide for active or passive controlled release of the molecules. Embodiments include systems for release of fragrance molecules and beverage additives.
DETD . . . by the patient. The drug molecules can come out of reservoirs in the MDI by any of several mechanisms, including **vaporization**, formation of an **aerosol**, atomization, or by Bernoulli's principle. In an alternative embodiment, the molecules are released by diffusion or vaporization from the opened. . . .

L17 ANSWER 4 OF 10 USPATFULL
AN 2002:16667 USPATFULL
TI Method for vaporization of liquid organic feedstock and method for growth of insulation film
IN Hayashi, Yoshihiro, Tokyo, JAPAN
Kawahara, Jun, Tokyo, JAPAN
Ono, Hirofumi, Shiga, JAPAN
PI US 2002009545 A1 20020124
AI US 2001-838343 A1 20010420 (9)
PRAI JP 2000-119023 20000420
DT Utility
FS APPLICATION
LREP SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037-3213
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 13 Drawing Page(s)
LN.CNT 855
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB In order to vaporize an organic monomer at a high temperature and a high
saturated vapor pressure in good efficiency and to grow an organic polymer film at a high rate in high vacuum by a plasma polymerization reaction of the resulting organic monomer gas, a liquid divinylsiloxanebisbenzocyclobutene (DVS-BCB) monomer is mixed with a carrier gas, and the mixture is then sprayed on a vaporization vacuum chamber held at a high temperature to form an aerosol made of liquid fine particles of the organic monomer, and a BCB monomer (organic monomer) is instantaneously **vaporized** via the **aerosol** to generate a BCB monomer gas (organic monomer gas). Consequently, the aerosol having a large specific surface area has a large vaporization area, and vaporization occurs by heating at a high temperature before a polymerization reaction occurs. Thus, 0.1 g/min or more of the BCB monomer gas can be formed at 200.degree. C. and a high saturated vapor pressure, and a plasma polymerization BCB film can be formed at a high rate which is at least 5 times higher than in the ordinary film formation.
AB . . . form an aerosol made of liquid fine particles of the organic monomer, and a BCB monomer (organic monomer) is instantaneously **vaporized** via the **aerosol** to generate a BCB monomer gas (organic monomer gas). Consequently, the aerosol having a large

specific surface area has a. . .

SUMM . . . liquid organic feedstock to form a gas-liquid mixed fluid, a second step of spraying the gas-liquid mixed fluid on a **vaporization** vacuum chamber to form an **aerosol** of the liquid organic feedstock and heating the **aerosol**, and a third step of **vaporizing** the liquid organic feedstock through the **aerosol**.

SUMM [0025] Further, according to the invention, there is provided a method for growth of an insulation film, wherein a **vaporization** device for heating an **aerosol** of liquid organic feedstock to **vaporize** the liquid organic feedstock through the **aerosol** and form the **vaporized** organic feedstock is directly connected with a plasma polymerization reaction chamber, and the vaporized organic feedstock is directly fed to. . .

DETD [0052] A block heater 63 heated at a predetermined temperature is installed in the **vaporization** vacuum chamber 57, and the **aerosol** 68 of the organic monomer is heated through the block heater 63. Such an **aerosol** 58 is **vaporized** by heating to form an organic monomer gas 41 which is discharged from a vaporized feedstock piping 39 along with. . . the carrier gas. Although a part of the aerosol is adhered to the surface of the block heater 63, this **aerosol** 58 is also instantaneously **vaporized**. The resulting organic monomer gas 41 is fed to a reaction chamber via the vaporized feedstock piping 39, activated through. . .

DETD . . . temperature is increased to 200.degree. C., the recovery rate becomes 100%. In the method of the invention in which the **aerosol** of the BCB monomer is **evaporated** by heating, the evaporation rate is high because of the large specific surface area.

Accordingly, the vaporization occurs instantaneously before. . .

DETD . . . is thus identified that the excess polymerization reaction can be controlled in the vaporization of the organic monomer by instantaneously **vaporizing** the **aerosol** of the organic monomer through heating.

DETD . . . of the mixing nozzle is 0.8 mm. The block heater 63 heated at a

predetermined temperature is installed in the **vaporization** vacuum chamber 57, and the **aerosol** 58 of the BCB monomer is heated via the block heater. This **aerosol** 58 is **vaporized** to form a BCB monomer gas 41 which is then discharged from the vaporized feedstock piping 39 along with the. . .

DETD . . . 3 torr, and an RF power is 50 W (0.1 W/cm.sup.2). In the method

of the invention in which the **aerosol** of the BCB monomer is instantaneously **vaporized**, the vaporization temperature can be 200.degree. C., and the vaporization rate of the BCB monomer reaches 0.1

g/min or more.. . .

CLM What is claimed is:

. . . liquid organic feedstock to form a gas-liquid mixed fluid; a second step of spraying the gas-liquid mixed fluid on a **vaporization** vacuum chamber to form an **aerosol** of the liquid organic feedstock and heating the **aerosol**; and a third step of **vaporizing** the liquid organic feedstock through the **aerosol**.

. . . liquid organic feedstock to form a gas-liquid mixed fluid; a second step of spraying the gas-liquid mixed fluid on a **vaporization** vacuum chamber to form an **aerosol** of the liquid organic feedstock and heating the **aerosol**; and a third step of **vaporizing** the liquid organic feedstock through the **aerosol**.

9. A method for growth of an insulation film, wherein a

vaporization device for heating an **aerosol** of liquid organic feedstock to **vaporize** the liquid organic feedstock through the **aerosol** and form the **vaporized** organic feedstock is directly connected with a plasma polymerization reaction chamber, and the vaporized organic feedstock is directly fed to. . .

L17 ANSWER 5 OF 10 USPATFULL
AN 2000:61530 USPATFULL
TI Nanoporous dielectric thin film surface modification
IN Smith, Douglas M., Albuquerque, NM, United States
Johnston, Gregory P., Albuquerque, NM, United States
Ackerman, William C., Albuquerque, NM, United States
Jeng, Shin-Puu, Plano, TX, United States
PA Texas Instruments Incorporated, Dallas, TX, United States (U.S. corporation)
PI US 6063714 20000516
AI US 1996-749186 19961114 (8)
PRAI US 1996-10511P 19960124 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Dudash, Diana; Assistant Examiner: Barr, Michael
LREP Denker, David, Hoel, Carlton H., Telecky, Jr., Frederick J.
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 836
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This pertains generally to precursors and deposition methods suited to aerogel thin film fabrication of nanoporous dielectrics. A method of forming a nanoporous dielectric on a semiconductor substrate is disclosed. By a method according to the present invention, a precursor sol is applied as a nongelling thin film 14 to a semiconductor substrate
10. This substrate may contain patterned conductors 12, gaps 13, and/or other structures. A portion of the solvent is evaporated from the thin film 14 to produce a reduced thickness film 18. Film 18 is gelled and may be aged. A surface modification agent is introduced to the reaction atmosphere in a **vaporish** form, e.g., a vapor, mist, **aerosol**, or similar form. The surface modifier can then diffuse into, condense onto, and/or settle onto the wet gel and then diffuse throughout the thin film. This vaporish introduction of the surface modification agent ensures that there are no strong fluid flows across the wafer that might damage the wet gel. It can also be compatible with standard processing equipment and can potentially be used with other reaction atmosphere controls that reduce premature drying of the gel.
AB . . . Film 18 is gelled and may be aged. A surface modification agent
is introduced to the reaction atmosphere in a **vaporish** form, e.g., a vapor, mist, **aerosol**, or similar form. The surface modifier can then diffuse into, condense onto, and/or settle onto the wet gel and then. . .
SUMM . . . immersing the wet gel. In this new method, the surface modification agent is introduced to the reaction atmosphere in a **vaporish** form, e.g., a vapor, mist, **aerosol**, or similar form. This **vaporish** form may be formed from a substantially pure agent or the agent may first be combined with a solvent or. . .
DETD . . . the wet gel film. In this new method, the surface modification agent is introduced to the reaction atmosphere in a **vaporish** form, e.g., a vapor, mist, **aerosol**, or similar form. The surface modifier can then diffuse into, condense onto, and/or settle onto the wet gel and then. . .

L17 ANSWER 6 OF 10 USPATFULL

AN 90:3823 USPATFULL
TI Interactive transector device commercial and military grade
IN Rowan, Larry, 34401/2 Caroline Ave., Culver City, CA, United States 90230
PI US 4893815 19900116
AI US 1987-90036 19870827 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Picard, Leo P.
LREP Meyer, Malke Leah Bas, Shlomo, Itzhak Ben
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 252 Drawing Figure(s); 136 Drawing Page(s)
LN.CNT 5191
AB A multiple task user based weapons system capable of neutralizing a variety of designated target types within a real time interval well below conventional systems faced with equivalent tasks. Said weapon system is described as a transector device. Target acquisition, assignment, pursuit and engagement of said targets by dedicated systems embodied within said transector device, including automated projectiles are described in detail. Additionally, the various options or strategies involved in neutralization of said designated targets to the exclusion of equivalent or similar non-designated targets are defined in the disclosure. Further the implementation interactive expert programs, embodying statistical analysis, pruning, probablistic mechanisms and other processes are described in relation to the operation of the aforesaid transector device.
DETD . . . of carrier mediated volatiles in the form of anesthetics, 1001, noxious or irritating antabuses,* 1010, and/or neural inhibitors, 1011. Fast **evaporating aerosols** dissipate surface heat rapidly inducing a chill factor to groups of targeted individuals, as described by programmed value 1100. The. . .

L17 ANSWER 7 OF 10 USPATFULL
AN 89:96870 USPATFULL
TI Interactive transector device
IN Rowan, Larry, 3440 Caroline Ave., Culvar City, CA, United States 90230
PI US 4884809 19891205
AI US 1985-814743 19851230 (6)
DT Utility
FS Granted
EXNAM Primary Examiner: Picard, Leo P.
LREP Meyer, Malke Leah Bas, Shlomo, Itzhak Ben
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 84 Drawing Figure(s); 40 Drawing Page(s)
LN.CNT 2520
AB A non-lethal multivariant device utilized by one or more individuals at close range (1.0-100 plus meters) to disperse crowds which exhibits a propensity towards violence, disposed to creating a public danger by inflecting bodily injury, loss of life or extensive property damage. A variety of preprogrammed functions are choosen at the discretion of the user to neutralize potentially dangerous individual which pose a threat to not only themselves but other members of society. The operative functions available to the user consists of but are not limited to the dispersal of non-lethal carrier mediated volitiles, short range high frequency electro-shock, administration of thermal inductants and the ability to project disruptive acoustical transmission. It is believed that the basic embodiment of the device provides a viable alternative to the user of such devices as guns, tear gas projectiles, mase, a class of high voltage low amp devices and numerous other means deployed by law

enforcement agencies to capture or subdue potentially dangerous individuals.

DETD . . . of carrier mediated volatiles in the form of anesthetics, 1001,
noxious or irritating antabuses,* 1010, and/or neural inhibitors, 1011. Fast **evaporating aerosols** dissipate surface heat rapidly inducing a chill factor to groups of targeted individuals, as described by programmed value 1100. The. . .

L17 ANSWER 8 OF 10 USPATFULL
AN 89:64905 USPATFULL
TI High efficiency apparatus for aerosol direct fluorination
IN Adcock, James L., Knoxville, TN, United States
PA The University of Tennessee Research Corporation, Knoxville, TN, United States (U.S. corporation)
PI US 4855112 19890808
AI US 1987-88158 19870821 (7)
DT Utility
FS Granted
EXNAM Primary Examiner: Castel, Benoit
LREP Luedeka, Hodges & Neely
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 767
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An apparatus for aerosol direct fluorination is disclosed in which a material to be fluorinated is formed into an aerosol prior to fluorination by introducing a vapor stream of the material to be fluorinated centrally into converging flows of carrier particles suspended in a gas and condensing the vapor onto the particles. Fluorine
is contacted with the aerosol in an elongated fluorination reactor having microporous walls providing a substantially continuous influx of fluorine-containing gas which creates an increasing fluorine concentration gradient as the aerosol moves through the reactor and provides a barrier to prevent contact of the aerosol with the microporous walls. A photochemical stage includes an elliptical reflector with a light source of one focus and a flow of aerosol and fluorine at the others.
DETD Referring again to FIG. 3, the suspended "pre-aerosol" sodium fluoride particles are supplied to the **aerosol** formation zone 92 at which the **vaporized** hydrocarbon condenses on the particles to form the aerosol. The hydrocarbon vapor stream is directed centrally into converging flows of. . .

L17 ANSWER 9 OF 10 USPATFULL
AN 80:5466 USPATFULL
TI Hybrid fix system incorporating photodegradable polymers
IN Marsh, Dana G., Rochester, NY, United States
Pochan, John M., Webster, NY, United States
PA Xerox Corporation, Stamford, CT, United States (U.S. corporation)
PI US 4186003 19800129
AI US 1974-512591 19741007 (5)
DT Utility
FS Granted
EXNAM Primary Examiner: Martin, Jr., Roland E.; Assistant Examiner: Goodrow, John L.
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 513
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A novel toner system is provided employing a photodegradable toner. These toners are photodegradable during the fixing step in

electrophotographic processes when they are exposed to light and then pressure or in the opposite sequences. This system provides excellent fixing of toner images at lower energy levels than is found in composition fixing systems.

DETD . . . an air driven rotating desk whose velocity is controlled by air

pressure. The solute-solvent system is instantly converted into an **aerosol** and upon solvent **evaporation** solid spherical particles result. A toner material including 10.35 grams of polystyrene,

1.15 grams of polyacetaldehyde produced above and benzophenone. . .

L17 ANSWER 10 OF 10 USPATFULL

AN 77:14066 USPATFULL

TI Hybrid fix system incorporating photodegradable polymers

IN Marsh, Dana G., Rochester, NY, United States
Pochan, John M., Webster, NY, United States

PA Xerox Corporation, Stamford, CT, United States (U.S. corporation)

PI US 4013572 19770322

AI US 1974-512590 19741007 (5)

DT Utility

FS Granted

EXNAM Primary Examiner: Klein, David; Assistant Examiner: Goodrow, John L.

LREP Ralabate, J. J.

CLMN Number of Claims: 12

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 555

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel toner system is provided employing a photodegradable toner. These toners are photodegradable during the fixing step in electrophotographic processes when they are exposed to light and then pressure or in the opposite sequences. This system provides excellent fixing of toner images at lower energy levels than is found in composition fixing systems.

DETD . . . an air driven rotating desk whose velocity is controlled by air

pressure. The solute-solvent system is instantly converted into an **aerosol** and upon solvent **evaporation** solid spherical particles result. A toner material including 10.35 grams of polystyrene,

1.15 grams of polyacetaldehyde produced above and diethylamino. . .

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     FILE 'EUROPATFULL, PCTFULL, USPATFULL, USPAT2' ENTERED AT 15:08:14 ON 21
     FEB 2003
L1        554181 S VAPORI? OR EVAPORAT?
L2         91986 S AEROSOL#
L3        866219 S POLYMER?
L4         16292 S L1(L)L2 AND L3
L5          1722 S L1(7A)L2
L6        294496 S MONOMER# OR OLIGOMER#
L7        329205 S L6 OR FEEDSTOCK# OR FEED(2W)STOCK#
L8        675783 S CARRIER
L9           285 S L5 AND L3 AND L8
L10           78 S L9 AND L7
                 SET HIGH OFF
L11       866219 S L3
L12       329205 S L7
L13       675783 S L8
                 SET HIGH ON
L14           78 S L5 AND L11 AND L12 AND L13
                 SET HIGH OFF
L15       202191 S INSULAT?(4A)(FILM# OR LAYER#)
L16      1622835 S HEAT?
                 SET HIGH ON
L17           10 S L14 AND L15 AND L16
L18         9873 S L1(L)(L7 OR PRECURSOR#)(L)L2
L19          277 S L18 AND L11 AND L13 AND (L15 OR DIELECTRIC (3A) (FILM# OR
LAY
L20          275 S L19 AND L16
L21          190 S L1(30A)(L7 OR PRECURSOR#)(30A)L2
L22           28 S L21 AND L11 AND L13 AND (L15 OR DIELECTRIC(4A)(FILM# OR LAYE
L23           27 S L22 NOT L17

=> d 5 11 15 20 bib ab kwic


L23    ANSWER 5 OF 27    PCTFULL   COPYRIGHT 2003 Univentio
AN     2001029282 PCTFULL  ED 20020820
TIEN   FLUID PROCESSING SYSTEM
TIFR   SYSTEME DE TRAITEMENT DE FLUIDE
IN     LOAN, James, F.; SALERNO, Jack, P.; BRUNELLI, Michael, F.
PA     CVD SYSTEMS, INC.; LOAN, James, F.; SALERNO, Jack, P.; BRUNELLI,
       Michael, F.
DT     Patent
PI     WO 2001029282          A2 20010426
DS     AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
       ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
       LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
       TR TT TZ UA UG US US US UZ VN YU ZA ZW GH GM KE LS MW MZ SD SL SZ TZ UG
       ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU
       MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
AI     WO 2000-US28998        A  20001020
PRAI   US 1999-09/421,828     19991020
       US 1999-09/421,823     19991020
       US 2000-09/678,460     20001003
ABEN   An apparatus for processing and deposition includes a dispenser for
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US 6,296,711 ✓

dispensing a precursor to a vaporizer positioned within a vaporization chamber. A delivery conduit joins the vaporization with a process chamber used a plurality of control valves. A flow meter is positioned within the delivery conduit for measuring the flow of precursor through the delivery conduit. A flow controller is likewise positioned within the delivery conduit for controlling the flow of precursor in response to the measured flow rate.

ABFR

DETD . . . controllers present a number of drawbacks. First, liquid mass flow controllers are extremely sensitive to particles and dissolved gases in the liquid **precursor**. Second, liquid mass flow controllers are also sensitive to variations in the temperature of the liquid **precursor**. Third, liquid mass flow controllers typically use a gas to assist in the **vaporization** of the liquid **precursor**, thereby increasing the probability of generating solid particles and **aerosols** and 1 0 ensuring a high gas load in the process system. Fourth, most liquid mass flow controllers cannot operate at temperatures. . .

hi addition to the fabrication of **dielectric layers**, metalization **layers**, and epitaxially grown semiconductor films including silicon, germanium, H-VI and 111-V materials, the system can be used for precision manufacture of optical. . .

. . . of TEOS vapor in the first vaporization subsystem 12. The TEOS vapor is reacted with N20 to form 2 0 a low-k **dielectric film** (S'02) on a heated substrate. Background discussion of deposition of silicon dioxide from TEOS/N20mixtures is provided in D.

After a sufficient thickness of the low-k **dielectric film** is deposited, the TEOS dispenser shuts off and vaporization commences in the second vaporization chamber 12', where TAETO vapor is generated and delivered to the process chamber 70, where the TAETO vapor is reacted with N20 toform. a high-k **dielectric film**, 3 0 tantalum oxide (Ta205), on the first (S'02) **dielectric film**. Finally, TiBr4or TDEAT vapor is generated in the third vaporization chamber 12 and reacted with ammonia (NH3) to form a very thin. . .

. . . as TaBr4, titanium nitride from a liquid precursor such as tetrakisdiethylamido titanium JDEAT), tetrakisdimethylamido titanium (TDMAT), TiBr4, or TiI4, low-k 1 5 **dielectric films** from hexasilsesquioxane (HSQ) or a fluorinated tetraethylorthosilicate (TEOS), and tantalum oxide from tantalum pentaethoxide

(TAETO) and either ozone or N20' Other films. . . . of thermal oxide. The properties of films deposited with 0 methods and apparatus described herein are sufficient for applications such as gate **dielectric** deposition. Typicallly, silica **layers** deposited by conventional methods have a refractive index below 1 However, as shown in Figure 20, silica layers deposited by methods described. . .

The film processing system is particularly suited for the deposition of thin **films** of 3 0 metals, **dielectric layers** used as insulators for these metals, low-k interlayer **dielectric layers**, capacitor dielectrics (denoted as high-k), and transistor gate dielectrics required for 0.25 micron or smaller linewidth processes. The processes can be used. . . . an apparatus and method described herein include aluminum, aluminum/copper (an alloy with 1 0 reduced liner requirements), barium titanate (a potential high-k **dielectric film**), and barium strontium titanate (another high-k **dielectric film**).

5 Chemical vapor deposition using the apparatus and methods described, above, can also be utilized for the deposition of **dielectric films** selected for their optical properties (e.g., refractive index) on a variety of substrates. Given the nature of light, the thickness of coatings. . .

Optical filters are fabricated using deposited **dielectric layers** by stacking alternating **layers** of two materials having different refractive indices. The thickness, refractive index, difference in refractive index of the two materials, and the. . .

L23 ANSWER 11 OF 27 USPATFULL
AN 2002:314453 USPATFULL
TI Combinatorial synthesis of material systems
IN Kodas, Toivo T., Albuquerque, NM, UNITED STATES
Hampden-Smith, Mark J., Albuquerque, NM, UNITED STATES
PI US 2002176927 A1 20021128
AI US 2001-821848 A1 20010329 (9)
DT Utility
FS APPLICATION
LREP MARSH FISCHMANN & BREYFOGLE LLP, Suite 411, 3151 S. Vaughn Way, Aurora, CO, 80014
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 6 Drawing Page(s)
LN.CNT 1532
AB Methods for formulating material systems of varying chemistry and stoichiometry. The material systems include two or more components and can be analyzed to select the system having the best properties for a particular application. Specific examples of materials systems that can be fabricated and analyzed according to the present invention include layers for membrane electrode assemblies (MEA's) that are useful in the construction of fuel cells and similar devices.

DETD . . . issued Aug. 15, 2000, which is incorporated herein by reference
in its entirety. In a spray pyrolysis system, the liquid-containing **precursor** is continuously atomized to form an **aerosol** of fine droplets that is passed through a reactor where the liquid **evaporates** and the **precursors** are converted to a reacted **precursor**. Spray pyrolysis can utilize non-volatile **precursors** such as metal salts that have been dissolved in a solvent, such as water. Although the precursor is in flowable. . .

L23 ANSWER 15 OF 27 USPATFULL
AN 2001:232366 USPATFULL
TI Electroluminescent phosphor powders, methods for making phosphor powders
and devices incorporating same
IN Hampden-Smith, Mark J., Albuquerque, NM, United States
Kodas, Toivo T., Albuquerque, NM, United States
Caruso, James, Albuquerque, NM, United States
Powell, Quint H., Albuquerque, NM, United States
Kunze, Klaus, Albuquerque, NM, United States
Skamser, Daniel J., Greenville, SC, United States
PI US 2001052589 A1 20011220
AI US 2001-757302 A1 20010109 (9)
RLI Division of Ser. No. US 1998-140525, filed on 27 Aug 1998, GRANTED, Pat.
No. US 6193908
DT Utility
FS APPLICATION
LREP MARSH FISCHMANN & BREYFOGLE LLP, 3151 South Vaughn Way, Suite 411, Aurora, CO, 80014
CLMN Number of Claims: 115
ECL Exemplary Claim: 1
DRWN 32 Drawing Page(s)
LN.CNT 2994
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Electroluminescent phosphor powders and a method for making phosphor powders. The phosphor powders have a small particle size, narrow particle size distribution and are substantially spherical. The method of the invention advantageously permits the economic production of such powders. The invention also relates to improved devices, such as electroluminescent display devices, incorporating the phosphor powders.
DETD . . . it has been found to be advantageous according to the present invention to provide means for adjusting the concentration of **precursor** in the liquid feed. More specifically, it has been found that during **aerosol** production, the **precursor** solution can concentrate due to the preferential **evaporation** of water from the liquid. As a result, it is desirable to provide water to the liquid either on a. . .
DETD [0239] An EL display is schematically illustrated in FIGS. 37 and 38. The EL display device 1120 includes a phosphor **layer** 1122 sandwiched between two **dielectric** insulating **layers** 1124 and 1126. On the back side of the insulating layers is a backplate 1128 which includes row electrodes 1130.. . .
DETD . . . substrates, such as stainless steel, for use in highway signage
and similar devices. The rigid device includes a phosphor particle **layer**, a ceramic **dielectric layer** and a transparent conducting electrode layer. Such devices are sometimes referred to as solid state ceramic electroluminescent lamps (SSCEL).
To.
. .

L23 ANSWER 20 OF 27 USPATFULL
AN 2001:32716 USPATFULL
TI Photoluminescent phosphor powders, methods for making phosphor powders

and devices incorporating same

IN Hampden-Smith, Mark J., Albuquerque, NM, United States
Kodas, Toivo T., Albuquerque, NM, United States
Caruso, James, Albuquerque, NM, United States
Skamser, Daniel J., Albuquerque, NM, United States
Powell, Quint H., Albuquerque, NM, United States
Kunze, Klaus, Albuquerque, NM, United States
PA Superior MicroPowders LLC, Albuquerque, NM, United States (U.S. corporation)

PI US 6197218 B1 20010306
AI US 1998-141393 19980827 (9)
RLI Continuation-in-part of Ser. No. US 1998-28603, filed on 24 Feb 1998
Continuation-in-part of Ser. No. US 1998-30057, filed on 24 Feb 1998
Continuation-in-part of Ser. No. US 1998-30060, filed on 24 Feb 1998
DT Utility
FS Granted
EXNAM Primary Examiner: Koslow, C. Melissa
LREP Marsh Fischmann & Breyfogle LLP
CLMN Number of Claims: 27
ECL Exemplary Claim: 1
DRWN 57 Drawing Figure(s); 40 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Photoluminescent phosphor powders and a method for making phosphor powders. The phosphor powders have a small particle size, narrow particle size distribution and are substantially spherical. The method of the invention advantageously permits the economic production of such powders. The invention also relates to improved devices, such as display devices and lighting elements, incorporating the phosphor powders.

DETD . . . it has been found to be advantageous according to the present invention to provide means for adjusting the concentration of **precursor** in the liquid feed. More specifically, it has been found that during **aerosol** production, the **precursor** solution can concentrate due to the preferential **evaporation** of water from the liquid. As a result, it is desirable to provide water to the liquid either on a. . .

DETD . . . at relatively low currents and can be driven either by an AC or DC signal. AC plasma systems use a **dielectric layer** over the electrode, which forms a capacitor. This impedance limits current and provides a necessary charge in the gas mixture.

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=> d his

     (FILE 'HOME' ENTERED AT 15:08:02 ON 21 FEB 2003)

     FILE 'EUROPATFULL, PCTFULL, USPATFULL, USPAT2' ENTERED AT 15:08:14 ON 21
     FEB 2003
L1        554181 S VAPORI? OR EVAPORAT?
L2         91986 S AEROSOL#
L3        866219 S POLYMER?
L4         16292 S L1(L)L2 AND L3
L5          1722 S L1(7A)L2
L6        294496 S MONOMER# OR OLIGOMER#
L7        329205 S L6 OR FEEDSTOCK# OR FEED(2W)STOCK#
L8        675783 S CARRIER
L9           285 S L5 AND L3 AND L8
L10           78 S L9 AND L7
                 SET HIGH OFF
L11       866219 S L3
L12       329205 S L7
L13       675783 S L8
                 SET HIGH ON
L14           78 S L5 AND L11 AND L12 AND L13
                 SET HIGH OFF
L15       202191 S INSULAT?(4A)(FILM# OR LAYER#)
L16      1622835 S HEAT?
                 SET HIGH ON
L17           10 S L14 AND L15 AND L16
L18         9873 S L1(L)(L7 OR PRECURSOR#)(L)L2
L19          277 S L18 AND L11 AND L13 AND (L15 OR DIELECTRIC (3A) (FILM# OR
LAY
L20          275 S L19 AND L16
L21          190 S L1(30A)(L7 OR PRECURSOR#)(30A)L2
L22           28 S L21 AND L11 AND L13 AND (L15 OR DIELECTRIC(4A)(FILM# OR LAYE
L23           27 S L22 NOT L17
                 SET HIGH OFF
L24       774233 S ORGANIC OR BCB
                 SET HIGH ON
L25          264 S L20 AND L24
L26          148 S SPRAY?(P)(VAPOR?(5W)CHAMBER#)(P)L2
L27           14 S L25 AND L26

=> d 6 7 14 bib ab


L27    ANSWER 6 OF 14  EUROPATFULL  COPYRIGHT  2003 WILA

GRANTED PATENT - ERTEILTES PATENT - BREVET DELIVRE

AN     173715  EUROPATFULL  ED 20020315  EW 199217  FS PS  STA B
TIEN   METHOD AND APPARATUS FOR THE GAS JET DEPOSITION OF CONDUCTING AND
     DIELECTRIC THIN SOLID FILMS AND PRODUCTS PRODUCED
       THEREBY.
TIDE   VERFAHREN UND VORRICHTUNG FUeR GASSTRAHLNIEDERSCHLAG VON LEITFAeHIGEN
       UND DIELEKTRISCHEN DUeNNEN FESTFILMEN UND SO HERGESTELLTE ERZEUGNISSE.
TIFR   PROCEDE ET APPAREIL POUR LE DEPOT PAR JET DE GAZ DE MINCES FILMS
SOLIDES
       CONDUCTEURS ET DIELECTRIQUES ET PRODUITS FABRIQUES DE LA SORTE.
IN     SCHMITT, Jerome J. III, 265 College Street Apt. 12N, New Haven, CT
```

06510, US
PA SCHMITT, Jer[redacted] J. III, 265 College Street Apt [redacted]2N, New Haven, CT 06510, US
PAN 391820
AG Kirby, Harold Douglas Benson et al, G.F. Redfern & Company Marlborough Lodge 14 Farncombe Road, Worthing West Sussex BN11 2BT, GB
AGN 32641
OS EPB1992021 EP 0173715 B1 920422
SO Wila-EPS-1992-H17-T3
DT Patent
LA Anmeldung in Englisch; Veroeffentlichung in Englisch
DS R AT; R BE; R CH; R DE; R FR; R GB; R LI; R LU; R NL; R SE
PIT EPB1 EUROPAEISCHE PATENTSCHRIFT (Internationale Anmeldung)
PI EP 173715 B1 19920422
OD 19860312
AI EP 1985-901214 19850212
PRAI US 1984-579676 19840213
RLI WO 85-US219 850212 INTAKZ
WO 8503460 850815 INTPNR
REP GB 2098241 A US 2155932 A
US 3382845 A US 3654895 A
US 3808035 A US 3840391 A
US 3850679 A US 4033286 A
US 4351267 A

L27 ANSWER 7 OF 14 PCTFULL COPYRIGHT 2003 Univentio
AN 2001032799 PCTFULL ED 20020820
TIEN PARTICLE DISPERSIONS
TIFR DISPERSIONS DE PARTICULES
IN REITZ, Hariklia, Dris; KAMBE, Nobuyuki; KUMAR, Sujeet; BI, Xiangxin
PA NANOGRAM CORPORATION
DT Patent
PI WO 2001032799 A1 20010510
DS CN IN JP KR AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
AI WO 2000-US30288 A 20001102
PRAI US 1999-09/433,202 19991104
ABEN Improved particle dispersions are formed using nanoparticles with average primary particle diameters less than about 100 nm. The collection of nanoparticles in the dispersion have very narrow particles size distributions that do not have tails at larger particle sizes. In particular, the collection of nanoparticles effectively do not have primary particles with a diameter greater than three times the average particle diameter. The improved dispersions can be used in the formation of polishing compositions for chemical-mechanical polishing and in the production of thin coatings.
ABFR

L27 ANSWER 14 OF 14 USPATFULL
AN 2002:16667 USPATFULL
TI Method for vaporization of liquid organic feedstock and method for growth of insulation film
IN Hayashi, Yoshihiro, Tokyo, JAPAN
Kawahara, Jun, Tokyo, JAPAN
Ono, Hirofumi, Shiga, JAPAN
PI US 2002009545 A1 20020124
AI US 2001-838343 A1 20010420 (9)
PRAI JP 2000-119023 20000420
DT Utility
FS APPLICATION
LREP SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037-3213
CLMN Number of Claims: 9
ECL Exemplary Claim: 1

application

DRWN 13 Drawing Page(s)
LN.CNT 855
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB In order to **vaporize** an organic **monomer** at a high temperature and a high saturated vapor pressure in good efficiency and to grow an organic polymer film at a high rate in high vacuum by a plasma polymerization reaction of the resulting organic **monomer** gas, a liquid divinylsiloxanebisbenzocyclobutene (DVS-BCB) **monomer** is mixed with a carrier gas, and the mixture is then **sprayed** on a **vaporization** vacuum **chamber** held at a high temperature to form an **aerosol** made of liquid fine particles of the organic **monomer**, and a BCB **monomer** (organic **monomer**) is instantaneously **vaporized** via the **aerosol** to generate a BCB **monomer** gas (organic **monomer** gas). Consequently, the **aerosol** having a large specific surface area has a large **vaporization** area, and **vaporization** occurs by heating at a high temperature before a polymerization reaction occurs. Thus, 0.1 g/min or more of the BCB **monomer** gas can be formed at 200.degree. C. and a high saturated vapor pressure, and a plasma polymerization BCB film can be formed at a high rate which is at least 5 times higher than in the ordinary film formation.

```
=> file japio

FILE 'JAPIO' ENTERED AT 16:20:14 ON 21 FEB 2003
COPYRIGHT (C) 2003 Japanese Patent Office (JPO)- JAPIO

FILE LAST UPDATED: 10 FEB 2003       <20030210/UP>
FILE COVERS APR 1973 TO OCTOBER 31, 2002

<<< GRAPHIC IMAGES AVAILABLE >>>

=> s aerosol#

L1         3383 AEROSOL#

=> s vapor? or evaporat?

          87836 VAPOR?
          68128 EVAPORAT?
L2       144061 VAPOR? OR EVAPORAT?

=> s monomer#

L3         62628 MONOMER#

=> s polymer?

L4        206103 POLYMER?

=> s heat?

L5        822309 HEAT?

=> d his


     (FILE 'HOME' ENTERED AT 16:20:06 ON 21 FEB 2003)

     FILE 'JAPIO' ENTERED AT 16:20:14 ON 21 FEB 2003
L1          3383 S AEROSOL#
L2        144061 S VAPOR? OR EVAPORAT?
L3         62628 S MONOMER#
L4        206103 S POLYMER?
L5        822309 S HEAT?

=> s l1 and l2 and l3 and l4

L6             1 L1 AND L2 AND L3 AND L4

=> d ab


L6   ANSWER 1 OF 1  JAPIO  COPYRIGHT 2003 JPO
AB   PROBLEM TO BE SOLVED: To efficiently vaporize an organic
     monomer at a high temperature for a high saturation vapor
     pressure and to quickly grow an organic polymer film by the
     plasma polymerization of the obtained organic monomer.
     SOLUTION: After mixing a liquid divinylsiloxane bisbenzocyclobutene(DVS-
     BCB) monomer with a carrier gas, the monomer is
     sprayed in a low-pressure vaporizing chamber held at high
```

temperatures to form **aerosol** of liquid particles of the organic **monomer**, and the BCB (organic) **monomer** is instantaneously **vaporized** via the **aerosol** to produce a BCB (organic) **monomer** gas. Since the **aerosol** large in specific surface area has a large **vaporizing** area and will **vaporize** before beginning a **polymerization**, if heated at high temperatures, this enables a BCB **monomer** gas of 0.1 g/min or larger at a high saturation **vapor** pressure of 200°C and a plasma **polymerized** BCB film can be formed at a rate more than 5 times as high as that in the prior art.
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=> d his

(FILE 'HOME' ENTERED AT 16:20:06 ON 21 FEB 2003)

FILE 'JAPIO' ENTERED AT 16:20:14 ON 21 FEB 2003
L1 3383 S AEROSOL#
L2 144061 S VAPOR? OR EVAPORAT?
L3 62628 S MONOMER#
L4 206103 S POLYMER?
L5 822309 S HEAT?
L6 1 S L1 AND L2 AND L3 AND L4

=> d all

L6 ANSWER 1 OF 1 JAPIO COPYRIGHT 2003 JPO
AN 2001-308082 JAPIO
TI METHOD OF **VAPORIZING** LIQUID ORGANIC MATERIAL AND METHOD OF GROWING INSULATION FILM
IN HAYASHI YOSHIHIRO; KAWAHARA JUN; ONO HIROFUMI
PA NEC CORP
LINTEC CO LTD
PI JP 2001308082 A 20011102 Heisei
AI JP 2000-119023 (JP2000119023 Heisei) 20000420
PRAI JP 2000-119023 20000420
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2001
IC ICM H01L021-31
ICS C23C014-12; C23C016-448; H01L021-312
ICA B05D003-12
AB PROBLEM TO BE SOLVED: To efficiently **vaporize** an organic **monomer** at a high temperature for a high saturation **vapor** pressure and to quickly grow an organic **polymer** film by the plasma **polymerization** of the obtained organic **monomer**.
SOLUTION: After mixing a liquid divinylsiloxane bisbenzocyclobutene(DVS-BCB) **monomer** with a carrier gas, the **monomer** is sprayed in a low-pressure **vaporizing** chamber held at high temperatures to form **aerosol** of liquid particles of the organic **monomer**, and the BCB (organic) **monomer** is instantaneously **vaporized** via the **aerosol** to produce a BCB (organic) **monomer** gas. Since the **aerosol** large in specific surface area has a large **vaporizing** area and will **vaporize** before beginning a **polymerization**, if heated at high temperatures, this enables a BCB **monomer** gas of 0.1 g/min or larger at a high saturation **vapor** pressure of 200°C and a plasma **polymerized** BCB film can be formed at a rate more than 5 times as high as that in the prior art.
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